So You Have An Idea
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Introduction

This discussion does not cover details of the patent law. Those are available elsewhere, for example, at the U.S. Patent and Trademark Office (PTO) in Crystal City, VA. Rather it is designed to help independent inventors make a practical assessment of their situation and provide a broad overview of the things they should do before deciding whether to seek patent protection or attempt to commercialize their invention. Although the law is different, further useful information (far more detailed than here is provided by the U.K. National Endowment for Science, Technology and the Arts -- funded by a £200M grant from the U.K. National Lottery).

The Mousetrap Myth

If a man can make a better mousetrap, though he builds his house in the woods the world will make a beaten path to his door.

Attributed to Ralph Waldo Emerson

Many inventors have heard variations on that remark. Few, however, have any basis for assessing its accuracy. As a counterpoint, let's consider a fellow who having made a better mousetrap, found no path beaten to his door. What was his mistake, and how can it be avoided?

The Better Mousetrap

In the early part of the 20th Century, the Animal Trap Company of America sold a five cent mousetrap. For years, the president of the company, Chester M. Woolworth, had tried to improve it, and in 1928 he succeeded.

Yet, he couldn't sell it. One problem was that it sold for twelve cents -- almost two and one-half times as much as its predecessor. Another is explained at page 12 by A. Kelly et al. in Venture Capital, a book published by the Management Institute of Boston College (2d ed. 1973):

Mr. Woolworth failed to look carefully at the way the average family used a mousetrap. The mousetrap was normally purchased by the husband who set the trap at night after the children were in bed. In the morning, the husband hurried off to work leaving the dead mouse in the trap. The housewife did not want a dead mouse around all day so she would pick up the trap and dispose of the mouse and the trap. Unfortunately for Mr. Woolworth, the new trap looked too expensive to throw away. So, the wife was forced to remove the mouse and clean the trap. Obviously, the average housewife felt much happier with the old five cent trap which could be thrown away. While the husband might buy the improved trap, the wife did not want it to be used. Thus, sales of the improved mousetrap were very low.

If an experienced manufacturer can make such a mistake, imagine the situation faced by people lacking that kind of insight. This may account for few independent inventors earning significant income from a first patented invention. Because patents cost thousands of dollars, market potential should be and continue to be a primary concern.

Inventors Beware

After one large promotion firm was required to disclose its track record, it turned out that fewer than one in 1,000 of its clients had earned more money than the fee it charged. Merely asking dollar-wise questions about such things may cause unscrupulous promoters to seek more gullible sheep for fleecing.

Some inventors try to avoid large initial investments by trying to sell their rights to established manufacturers. Yet, many companies are "flooded" with inquiries and may give little attention to such submissions. Inventors who try to approach companies directly will find that some reject them out of hand. Others will refuse to consider an outside invention unless it is (at least) in the process of being patented. Also, no large company is likely to accept any obligations in order to evaluate an outside submission unless it seems to be a workable solution to a pressing problem.

After failing in their initial approaches to companies, inventors will occasionally turn to an invention promotion firm that claims to have access to or know how to approach corporate decision makers. Some of them are reputable and may be able, for a fee, to sell an invention, but inventors should be quite wary, particularly if success is guaranteed.

Thanks to the efforts of government authorities, several such firms no longer exist. Yet, because of continuing demand for their services, others will spring up to replace them. To determine whether to deal with a particular firm, an inventor should inquire into the frequency of its prior successes, be leery of stories that sound too good to be true, inquire at local consumer protection agencies or Better Business Bureaus, and ask for references.

The April, 1996 Disclaimer, lists many "red flags" that strongly suggest invention promoters to avoid. [The Disclaimer is the newsletter of the Inventors' Awareness Group -- dedicated to eradicating fraudulent invention promoters.] The government can't find and stop all the frauds. Even when it closes them down, inventors recover little money. Caveat emptor!

Further, the online article Can You Really Get a Patent Without a Lawyer? mostly promotes the book, Patent It Yourself. Whether you can get a patent without expert help and whether you can get one worth the rock-bottom cost of $1030, are two very different questions. That issue is partly addressed here but even more pointedly in Seeking Cost-Effective Patents.

The Relationship Between Profit Potential and Legal Protection

Legal protection is like a lock on a door. On the one hand, no one would buy an expensive lock to protect something nobody wants. On the other hand, it would be foolish to use a cheap lock to safeguard very valuable property. Because inventions are property, the appropriate amount of protection must be determined, not once but repeatedly, by ongoing efforts to evaluate their profit potential.

Questions to Answer

Evidence of profit potential for new products or services is not only useful in determining whether to pursue a patent but also to get the attention of reputable promoters and established manufacturers -- whether or not a patent is being sought. Even inventors inclined to make and sell products themselves have to show potential adequate to attract capital. At a minimum, this requires information about several basic, interrelated matters: customers, production cost, distribution cost and competition.

Will it work? But, before doing anything else, inventors must make absolutely sure that their inventions work. (Sometimes, as shown below, even patented inventions simply do not.)

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Here is a drawing from an 1879 patent entitled "Fire Escape." It represents a person with thick, crepe-soled shoes using a parachute.

The parachute is unfortunately attached only to a hat, and the hat is, in turn, strapped under the person's chin.

Could anyone use this invention without quickly hanging?

Customers. Who and how many are they? Where do they live? How much are they willing to spend for this kind of product or service? Where do they purchase it? Are there special factors involved in how the product is used (as Mr. Woolworth found out the hard way)?

Production cost. What factors will influence it? For example, can the invention be assembled from stock (off the shelf) parts or will expensive custom tooling be needed? Will assembly require skilled and expensive labor? Does the price per unit drop significantly as production volume increases?

Distribution cost. How much does it cost to ship the product? For example, is it possible to use slower but cheaper means? Are there special marketing or installation costs? For example, does a product require installation by skilled personnel?

Competition. Are there substitutes available? How do they compare in value? Do other suppliers enjoy economies of scale in manufacturing or distribution, trained service personnel, or customer loyalty? If so, how will competitors' advantages be overcome?

See also the Inventor's Reality Checklist at Arthur D. Little Enterprises.

Getting Answers

Estimating profitability is often difficult. However, much general information can be obtained in public libraries -- as well as from government agencies and trade and business associations. For example, the Department of Commerce has census and other useful data.

Inventors with questions about the market or other matters specific to their products (unlikely to be available from public sources), should consult some of the many how-to-do-it books for entrepreneurs. Also, elementary books on more narrow subjects such as marketing are available.

Seeking free help. The Small Business Administration and local government agencies may be able to suggest low (or no) cost services provided by retired business executives or college students. If none of those are handy, an inventor should directly approach faculty members at local colleges. Sometimes they are looking for student projects. Also, schools may have programs designed specifically to aid entrepreneurs.

Inventors Clubs. There is no better source of advice than people who have gone through the same thing. For that reason, it is worthwhile to investigate national or local inventors clubs.

The Need for a Prior Art Search

Before spending too much time and money to determine whether an invention will cost-effectively satisfy consumer demand, an inventor needs to make sure that others do not have exclusive rights in the technology. Do not assume, because a product is not on the market, that it is new or unpatented. It may be much easier to solve a problem than to profit from the solution (or to patent it).

Get a competent search. Rights in inventions are determined by having patent attorneys or agents conduct or arrange for a "prior art" search. [Both attorneys and agents are technically trained persons who have also passed a special examination given by the U.S. Patent Office. Agents can only

"prosecute" patent applications, but only lawyers can draft contracts or provide other general legal services.] The cost of a prior art search should vary by subject matter complexity, but it is possible to agree no more than a certain amount will be spent -- the ceiling being preferably determined by early indications of the invention's market value .

The possible results. If the patent attorney or agent finds an invention to fall within the general subject matter that may be protected by the patent law, a prior art search could reveal that: (1) someone else had a patent that has since expired, (2) someone else has a current patent covering all or part of the invention, or (3) no current or expired patents disclose or cover the invention. Lets consider each of those.

Using Search Results

The invention is in the public domain. If an invention (or an obvious variation) is disclosed in an expired patent or any prior publication, anyone can practice it without concern for the patent laws, and no one can thereafter get exclusive rights to it. An often overlooked advantage of a prior art search is that it may reveal a host of good and freely useable ideas. Those, alone, could be worth several times the price of the search.

The invention is patented. If a current patent claims any part of the invention, its owner has exclusive rights until it expires. Meanwhile, no other person can legally use the claimed technology without permission. [Claims are the most important part of patents. It is often easy to get narrow claims that provide no useful protection. Unless you just want to say you have a "patent," what's the point?]

The invention is new. Where an invention is a significant improvement over technology disclosed in patents and other public sources, the situation is more complicated. The inventor may seek a patent, practice the invention without further ado, or attempt to sell his rights. Again, if the first option is successfully pursued, the inventor will be able to prevent others from using its claimed subject matter for the term of a patent (currently 20 years from the date an application is filed with some possibility for brief extensions of time for unusual delay in the PTO), and thereafter anyone can use it.

Trade secrets. If an invention, such as a new manufacturing process, can be used so that others cannot learn it by examining a sample product (reverse engineering), protection may be feasible under trade secret laws. However, such protection provides no rights against competitors who discover the invention by reverse engineering or independent effort.

National and International Time Bars

Entrepreneurs should know that, whether or not trade secret protection is available for an invention, the right to a patent in most foreign countries is lost after any commercial use, even though U.S. law permits delays of up to one year in filing.

Also, it is worth noting that a trade secret user may be excluded from the market by a patent obtained by a subsequent inventor.

Making a Record

Many inventors are concerned about having inventions stolen. The best protection against this is to use care in selecting the people with whom to deal. However, even honest people may have occasion to dispute whether an inventor was actually the first to discover a technology. It is therefore useful to keep records for that as well as for tax purposes.

From the earliest development of an invention, one should keep track of what was done, when it was done, and, for tax purposes, how much was spent. The last is fairly simple, but one wants to include everything such as materials, long distance phone charges and travel expenses.

Records should be kept with their value as legal proof in mind, and such things as mailing oneself a registered letter do not furnish the best proof.

To prove what was done at any given time, an inventor must prepare a written description, with sketches if needed. Neither the sketches nor description need be formal, but each should be complete and readily understood by others.

Do not leave blanks in an invention description. Also, avoid erasures, and line out mistakes. The complete document should then be given to one or two trusted and reasonably knowledgeable witnesses to write "Read and understood" as well as to sign and date every page. If possible, their signatures should be notarized.

The U.S. PTO Document Disclosure Program

Although the fee is small ($10), it is difficult to see much advantage to inventors' using the PTO's Document Disclosure Program.

The U.S. Patent and Trademark Office will keep copies of an inventor's papers for a period of time. Details are available online or can be obtained by writing the Commissioner of Patents and Trademarks, Washington, DC 20231

However, the value of this program is unclear. As explained in the official brochure, this does not diminish the need for witnessed and notarized records. Nor does it, unlike filing of provisional patent applications, prevent subsequent inventors from prevailing in contests to determine which one will get a patent on the same invention. Finally, filing under the Document Disclosure Program does not permit one, for example, to disclose or use an invention publicly without immediately forfeiting patent rights in most countries and forfeiting rights in the U.S. after one year -- see National and International Time Bars, above; see also, the warning at the end of the PTO brochure!

Selling Inventions Revisited

As explained above, one needs to hire an expert to conduct a prior art search. Assuming that preliminary legal and profit assessments are favorable, inventors have two options. The first is to file applications in the U.S. and/or other countries. However, since this may prove quite expensive for independent inventors for whom an invention is generating no income, they may want to again consider approaching established companies. If professional inquiries are made, companies may be more receptive.

If legally sufficient records have been kept as discussed above, one need not be quite so concerned about having an invention stolen. Still, reputable companies do not want more information than needed to show that an invention:

can be sold within its market,
has adequate profit potential,
is not already known in-house, and
is one in which the outsider has legal rights.

If a way can be devised to provide that information without revealing how the invention works, it will be unnecessary to ask company personnel to sign nondisclosure agreements or to file a patent application prior to any discussions. However, it may require considerable skill to pull it off. Indeed, it may be impossible to tread this line without experienced help. However it is done, if a company continues to be interested and is confident that it is dealing with professionals, it may sign nondisclosure agreements.

Still, inventors must appreciate that most companies are fearful of dealing with outsiders who may have, for example, good ideas but no notion of how to implement them. I know of at least one situation where an idea, already known to a company, has been repeatedly submitted by outsiders. It hasn't been used because the company doesn't know how to do so at reasonable cost. If the company eventually solves the problem, using the idea will expose it to a host of law suits from disgruntled inventors, all thinking that "their" idea had been stolen. Under such circumstances, the company might well not use the idea even if it could!

No contract should be signed without advice of counsel!

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URL: HTTP://WWW.FPLC.EDU/TFIELD/IDEA.HTM